

## **Have Orcas Confirmed the Prediction of Exobiology?**

For decades now we have broadcast into outer space the radio-frequency of the Hydrogen atom supposedly because intelligent life out there would recognize it as an effort to communicate and so would respond in an appropriate way indicating that, “We know you are trying to communicate with us and we’d like to communicate with you.” That’s the prediction.

In the mid-70s, the same experiment was conducted in B.C. by Erich Hoyt, the sound engineer aboard a sailboat where a film crew was making the first documentary about orcas. In his book, *Orca: A Whale Called Killer*, Hoyt says that he assumed that the one sound he heard most often from the resident orcas might be a greeting call. He went to work with the synthesizer on board to produce an imitation of the call, but even the crew could distinguish the imitation from the real sound.

Not only that, we discovered in the late 1970s with the help of the Applied Physics Lab at the University of Washington that audible orca sounds including whistles like the one Hoyt thought was a greeting call go to extremely high frequencies, more than ten times higher than our upper hearing range. The upper frequency that humans can detect is about 20,000 cycles per second, but the orca sounds we recorded with the world’s leading technology at that time went up to 250,000 c.p.s., the implication being that orcas emit enormous amounts of information in a small period of time.

So Hoyt broadcast his imitation from underwater to the orcas coming down Johnstone

Strait. Keep in mind that the human ear could detect the imitation, and that the actual sound made by the orcas extends far above the capacity of his synthesizer. According to Hoyt, the orcas swam directly to the boat's hydrophone and made a "perfect imitation" of his imitation.

Hoyt's experiment confirms the prediction of exobiology: if there is intelligent life out there they will perceive the intent of our broadcast and respond in such a way that confirms they perceive our effort to communicate and they would like to communicate with us.

In the late 70s I wrote a letter about Hoyt's experiment and submitted it to the A.A.A.S. journal *Science*, precisely because it demonstrates that orcas are intelligent lifeforms and that we may be able to communicate with them. The letter was returned, rejected without comment. Perhaps there is intelligent life only in the sea.